

REGULATION III - CONTROL OF AIR CONTAMINANTS

**RULE 316
NONMETALLIC MINERAL MINING AND PROCESSING**

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**MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS**

REGULATION III - CONTROL OF AIR CONTAMINANTS

**RULE 316
NONMETALLIC MINERAL MINING AND PROCESSING**

SECTION 100 - GENERAL

- 101 PURPOSE:** To limit the emission of particulate matter into the ambient air from any nonmetallic mining operation or rock product processing plant.
- 102 APPLICABILITY:** The provisions of this rule shall apply to any commercial and/or industrial nonmetallic mineral mining and/or rock product plant operation. Compliance with the provisions of this rule shall not relieve any person subject to the requirements of this rule from complying with any other federally enforceable New Source Performance Standards. In such case, the more stringent standard shall apply.

SECTION 200 - DEFINITIONS: For the purpose of this rule, the following definitions shall apply:

- 201 AFFECTED OPERATION** - An operation that processes nonmetallic minerals or that is related to such processing and process sources including, but not limited to, crushers, grinding mills, screening equipment, conveying systems, elevators, transfer points, bagging operations, storage bins, enclosed truck and railcar loading stations and truck dumping.
- 202 APPROVED EMISSION CONTROL SYSTEM** - A system for reducing particulate emissions, consisting of collection and/or control devices which are approved in writing by the Control Officer and are designed and operated in accordance with good engineering practice.
- 203 ASPHALTIC CONCRETE PLANT/ASPHALT PLANT** - Any facility used to manufacture asphaltic concrete by mixing graded aggregate and asphaltic cements.
- 204 BAGGING OPERATION** - The mechanical process by which bags are filled with nonmetallic minerals.
- 205 BELT CONVEYOR** - A conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.
- 206 CONCRETE PLANT** - Any facility used to manufacture concrete by mixing water, aggregate, and cement.

- 207 CONVEYING SYSTEM** - A device for transporting materials from one piece of equipment or location to another location within a facility. Conveying systems include, but are not limited to, feeders, belt conveyers, bucket elevators and pneumatic systems.
- 208 CRUSHER** - A machine used to crush any nonmetallic minerals, including, but not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.
- 209 DRY MIX CONCRETE PLANT** - Any facility used to manufacture a mixture of aggregate and cements without the addition of water.
- 210 ENCLOSED TRUCK OR RAILCAR LOADING STATION** - That portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.
- 211 FUGITIVE DUST EMISSION** - Particulate matter that is not collected by a capture system and is released to and suspended in the ambient air.
- 212 GRINDING MILL** - A machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.
- 213 NONMETALLIC MINERAL** - Any of the following minerals or any mixture of which the majority is any of the following minerals:
- 213.1** Crushed and broken stone, including limestone, dolomite, granite, rhyolite, traprock, sandstone, quartz, quartzite, marl, marble, slate, shale, oil shale, and shell.
 - 213.2** Sand and gravel.
 - 213.3** Clay including kaolin, fireclay, bentonite, fuller's earth, ball clay, and common clay.
 - 213.4** Rock salt.
 - 213.5** Gypsum.
 - 213.6** Sodium compounds, including sodium carbonate, sodium chloride, and sodium sulfate.
 - 213.7** Pumice.
 - 213.8** Gilsonite.
 - 213.9** Talc and pyrophyllite.
 - 213.10** Boron, including borax, kernite, and colemanite.
 - 213.11** Barite.
 - 213.12** Fluorspar.
 - 213.13** Feldspar.
 - 213.14** Diatomite.
 - 213.15** Perlite.
 - 213.16** Vermiculite.
 - 213.17** Mica.
 - 213.18** Kyanite, including andalusite, sillimanite, topaz, and dumortierite.

213.19 Coal.

- 214 NONMETALLIC MINERAL PROCESSING PLANT** - Any facility utilizing any combination of equipment or machinery that is used to mine, excavate, separate, combine, crush, or grind any nonmetallic mineral, including, but not limited to: lime plants, coal fired power plants, steel mills, asphalt plants, concrete plants, portland cement plants, and sand and gravel plants. Rock Product Processing Plants are included in this definition.
- 215 PARTICULATE MATTER** - Any material, except uncombined water, which has a nominal aerodynamic diameter smaller than 100 microns (micrometers), and which exists in a finely divided form as a liquid or solid at actual conditions.
- 216 PARTICULATE MATTER EMISSIONS** - Any and all finely divided solid or liquid materials other than uncombined water released to the ambient air as measured by the applicable state and federal test methods.
- 217 PROCESS** - One or more operations including those using equipment and technology in the production of goods or services or the control of by-products or waste.
- 218 PROCESS SOURCE** - The last operation of a process or a distinctly separate process which produces an air contaminant and which is not a pollution abatement operation.
- 219 SCREENING OPERATION** - A device that separates material according to its size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens).
- 220 STACK EMISSIONS** - The particulate matter emissions that are released to the atmosphere from a capture system through a building vent, stack or other point source discharge.
- 221 STORAGE BIN** - A facility enclosure, hopper, silo or surge bin for the storage of nonmetallic minerals prior to further processing or loading.
- 222 TRANSFER POINT** - A point in a conveying operation where nonmetallic mineral is transferred from or to a belt conveyor except for transfer to a stockpile.
- 223 TRUCK DUMPING** - The unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include, but are not limited to, trucks, front end loaders, skip hoists, and railcars.
- 224 VENT** - An opening through which there is mechanically or naturally induced air flow for the purpose of exhausting air carrying particulate matter.

SECTION 300 - STANDARDS

- 301 LIMITATIONS - NONMETALLIC MINERAL PROCESSING PLANTS:** No person shall discharge or cause or allow to be discharged into the ambient air:
- 301.1** Stack emissions exceeding 7% opacity and containing more than 0.02 gr/dscf (50 mg/dscm) of particulate matter.
 - 301.2** Fugitive dust emissions from any “transfer point” on a conveying system exceeding 7% opacity.
 - 301.3** Fugitive dust emissions exceeding 15% opacity from any crusher.
 - 301.4** Fugitive dust emissions exceeding 10% opacity from any affected operation or process source, excluding truck dumping directly into any screening operation, feed hopper or crusher.
 - 301.5** Fugitive dust emissions exceeding 20% opacity from truck dumping directly into any screening operation, feed hopper or crusher.
- 302 LIMITATIONS - ASPHALTIC CONCRETE PLANTS:** No person shall discharge or cause or allow to be discharged into the ambient air:
- 302.1** Stack emissions exceeding 20% opacity and containing more than 0.04 gr/dscf (90 mg/dscm) of particulate matter.
 - 302.2** Fugitive dust emissions exceeding 20% opacity from any other affected operation or process source.
- 303 LIMITATIONS - CONCRETE PLANTS AND BAGGING OPERATIONS:** No person shall discharge or cause or allow to be discharged into the ambient air:
- 303.1** Stack emissions exceeding 7% opacity.
 - 303.2** Fugitive dust emissions exceeding 10% opacity from any affected operation or process source, excluding truck dumping directly into any screening operation, feed hopper or crusher.
 - 303.3** Fugitive dust emissions exceeding 20% opacity from truck dumping directly into any screening operation, feed hopper or crusher.
- 304 LIMITATIONS - OTHER ASSOCIATED OPERATIONS:** All other activities not specifically listed in Sections 301, 302, or 303 of this rule associated with the mining and processing of nonmetallic minerals, shall, at a minimum, meet the provisions of Rule 310 of these rules.
- 305 REQUIREMENT FOR AIR POLLUTION CONTROL EQUIPMENT AND EMISSION CONTROL SYSTEM (ECS) MONITORING EQUIPMENT:** For the purposes of this rule, an emission control system (ECS) is a system for reducing emissions of

particulates, consisting of both collection and control devices, which are approved in writing by the Control Officer and are designed and operated in accordance with good engineering practices.

305.1 Operation And Maintenance (O&M) Plan Requirements For ECS:

- a. An owner or operator of a facility shall provide and maintain, readily available on-site at all times, (an) O&M Plan(s) for any ECS, any other emission processing equipment, and any ECS monitoring devices that are used pursuant to this rule or to an air pollution control permit.
- b. The owner or operator of a facility shall submit to the Control Officer for approval the O&M Plans of each ECS and of each ECS monitoring device that is used pursuant to this rule.
- c. The owner or operator of a facility shall comply with all the identified actions and schedules provided in each O&M Plan.

305.2 Providing And Maintaining ECS Monitoring Devices: An owner or operator of a facility operating an ECS pursuant to this rule shall install, maintain, and calibrate monitoring devices described in the O&M Plan. The monitoring devices shall measure pressures, rates of flow, and/or other operating conditions necessary to determine if the control devices are functioning properly.

305.3 O&M Plan Responsibility: An owner or operator of a facility that is required to have an O&M Plan pursuant to subsection 305.1 of this rule must fully comply with all O&M Plans that the owner or operator has submitted for approval, even if such O&M Plans have not yet been approved, unless notified in writing by the Control Officer.

SECTION 400 - ADMINISTRATIVE REQUIREMENTS

401 O&M PLAN COMPLIANCE SCHEDULE: Any owner or operator of a facility employing an ECS device as of April 21, 1999 to meet the requirements of this rule, shall file, by October 18, 1999, an O&M Plan with the Control Officer in accordance with subsection 501.3 of this rule.

SECTION 500 - MONITORING AND RECORDS

501 RECORDKEEPING AND REPORTING: Any person subject to this rule shall comply with the following requirements. Records shall be retained for 5 years and shall be made available to the Control Officer upon request.

501.1 Operational information required by this rule shall be kept in a complete and consistent manner on site and be made available without delay to the Control Officer upon request.

501.2 Records of the following process and operational information, as applicable, are required:

- a. General Data:** Daily records shall be kept for all days that a plant is actively operating. Records shall include the following: hours of operation; type of batch operation (wet, dry, central); throughput per day of basic raw materials including sand, aggregate, cement, (tons/day); volume of concrete and asphaltic concrete produced per day; volume of aggregate mined per day (cu. yds./day); composition of a cubic yard of concrete produced (percent cement, sand, aggregate, admixture, water, fly ash, etc.); composition of a cubic yard of asphaltic concrete produced (percent cement, sand, aggregate, gypsum, admixture, water, fly ash, etc.); amount of each basic raw material including sand, aggregate, cement, fly ash delivered per day (tons/day).
- b. Additional Data For Dry Mix Concrete Plants:** The number of bags of dry mix produced per day; weight (size) of bags of dry mix produced per day; kind and amount of fuel consumed in dryer (cu. ft./day or gals./day); kind and amount of any back-up fuel (if any).
- c. Control And Monitoring Device Data:** Baghouse records shall include dates of inspection, dates and designation of bag replacement, dates of service or maintenance, related activities, static pressure gauge (manometer) hourly readings. Scrubber records shall include dates of service or maintenance related activities; the scrubbing liquid flow rate; the pressure or head loss; and/or any other operating parameters which need to be monitored to assure that the scrubber is functioning properly and operating within design parameters. Records of time, date and cause of all control device failure and down time shall also be maintained.

501.3 ECS O&M Plan Records: An owner or operator of a facility shall maintain a record of the periods of time than an approved ECS is used to comply with this rule. Key system parameters, such as flow rates, pressure drops, and other conditions necessary to determine if the control equipment is functioning properly, shall be recorded in accordance with the approved O&M Plan. The records shall account for any periods when the control system was not operating. The owner or operator of a facility shall also maintain results of the visual inspection and shall record any corrective action taken, if necessary.

502 COMPLIANCE DETERMINATION: The test methods for those subparts of 40 Code Of Federal Regulations (CFR) Part 60, Appendix A, adopted as of July 1, 1998, as listed below, are adopted by reference as indicated. This adoption by reference includes no future editions or amendments. Copies of test methods referenced in Section 502 of this rule are available at the Maricopa County Environmental Services Department, 1001 North Central Avenue, Phoenix, Arizona, 85004-1942. When more than one test method is permitted for a compliance determination, then an

exceedance of the limits established in this rule, determined by any of the applicable test methods, constitutes a violation of this rule.

502.1 Grain Loading: Particulate matter and associated moisture content shall be determined using the applicable EPA Reference Methods 1 through 5, 40 CFR Part 60, Appendix A.

502.2 Opacity Determination: Opacity observations to measure the opacity of visible emissions shall be conducted in accordance with the techniques specified in EPA Reference Method 9, 40 CFR Part 60, Appendix A, except the opacity observations for intermittent visible emissions shall require 12 (rather than 24) consecutive readings at 15-second intervals.

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